

**Serial No. 10/516,084**  
**Atty. Doc. No. 2002P07513WOUS**

**REMARKS**

Claims 38, 39, 41, 43 and 44 are pending in this application.

The Examiner has notified the undersigned attorney of his consideration of prior art patent number 6,532,810 issued to Ahmed. Ahmed describes an apparatus for detecting damage in an automobile timing belt using inductive link coupling. The device of Ahmed inductively links first and second coils by means of a conductive loop formed in the timing belt. The inductive coupling concept of Ahmed requires that both of the first and second coils are physically proximate the timing belt. This presents an access problem for the required electrical interconnections. (Ahmed column 15, line 65 through column 16, line 8) Ahmed attempts to minimize this problem with the embodiment shown in FIG. 12 which reduces the number of interconnections that are required, but still requires one wire to pass through the timing belt cover wall. (Ahmed column 16, line 9 and forward)

The present invention overcomes this problem of the prior art by providing an apparatus wherein the monitoring structure serves not only as a fault detector, but also as an antenna for two-way radiofrequency communication, thereby allowing for remote radiofrequency interrogation of the component being monitored. The claims have been amended herein to clarify and highlight this distinction over the prior art.

Claim 38 has also been amended to clarify and highlight the novel concept of locating the monitoring structure/resonant circuit antenna at a location that corresponds to a critical location, such that cracks that are less than a critical length and that do not extend to the critical location are not detected, but cracks that do extend beyond a critical length and through the critical location are detected. The concept of critical length is well known in the art of fracture mechanics. As discussed in paragraphs 0013 and 0014 of the present specification, the present invention includes embodiments that uniquely combine the function of monitoring structure and resonant circuit and antenna by arranging an electrical conductor at the critical location so that inspection of the component is improved.

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**Conclusion:**

Entry of this amendment and reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,

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By: \_\_\_\_\_

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